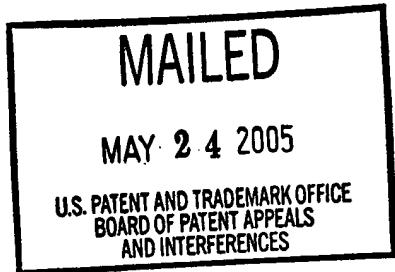


The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

## UNITED STATES PATENT AND TRADEMARK OFFICE

### BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte MICHAEL J. SULLIVAN, THOMAS J. KENNEDY III,  
JOHN L. NEALON and KEVIN J. SHANNON



Appeal No. 2005-1116  
Application No. 10/077,148

ON BRIEF

Before FRANKFORT, McQUADE, and NASE, Administrative Patent Judges.  
NASE, Administrative Patent Judge.

#### DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 38 to 42, 44 to 49 and 51 to 57, which are all of the claims pending in this application.

We REVERSE.

BACKGROUND

The appellants' invention relates to golf balls having a soft core (specification, p. 1). A copy of the claims under appeal is set forth in the appendix to the appellants' brief.

Claims 38 to 42, 44 to 49 and 51 to 57 stand rejected under 35 U.S.C. § 102(e) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,779,563 to Yamagishi et al. (Yamagishi).

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejection, we make reference to the answer (mailed November 15, 2004) for the examiner's complete reasoning in support of the rejection, and to the brief (filed August 20, 2004) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the Yamagishi patent, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

Claims 38, 47 and 53, the independent claims on appeal, read as follows:

38. A golf ball comprising:  
a solid core, wherein the core has a PGA compression of 55 or less;  
a cover comprising an inner cover layer and an outer cover layer, wherein  
the inner cover layer comprises an ionomer resin and the outer cover layer  
comprises a polyurethane and wherein outer cover layer has a Shore D  
hardness of about 58 or more;  
the ball having a PGA compression of 80 or less and a coefficient of  
restitution of at least 0.780.
47. A golf ball comprising:  
a solid polybutadiene core, wherein the core has a PGA compression of  
55 or less;  
an outer polyurethane cover layer having a Shore D hardness of about 58  
or more;  
the ball having a PGA compression of 80 or less and a coefficient of  
restitution of at least 0.780.
53. A golf ball comprising:  
a solid polybutadiene core, wherein the core has a PGA compression of  
55 or less;  
a cover comprising an inner cover layer and an outer cover layer, wherein  
the inner cover layer comprises an ionomer resin and the outer cover layer  
comprises a polyurethane and wherein outer cover layer has a Shore D  
hardness of about 58 or more;  
the ball having a PGA compression of 80 or less and a coefficient of  
restitution of at least 0.780.

Yamagishi's invention relates to a multi-piece solid golf ball which is improved in flying distance, controllability, roll and straight travel upon putting as well as restitution and durability. As shown in Figure 1, the multi-piece solid golf ball comprises a solid

core 1 formed of a rubber base and a cover 4 on the core consisting of two layers, an inner layer 2 and an outer layer 3.

Yamagishi's solid core 1 should have a specific gravity of at least 1.00, preferably 1.02 to 1.18, more preferably 1.06 to 1.15. The solid core 1 may be made of well-known materials and formed by conventional techniques while properly adjusting vulcanizing conditions and formulation. The core formulation may contain a base rubber, crosslinking agent, co-crosslinking agent, and inert filler. The base rubber which can be used is natural rubber and/or synthetic rubber used in conventional solid golf balls. Yamagishi prefers to use 1,4-polybutadiene having at least 40% of cis-structure. The polybutadiene may be blended with natural rubber, polyisoprene rubber, styrene-butadiene rubber or the like, if desired. Yamagishi teaches (column 3, lines 43-55) that:

By a proper choice of the type and amount of compounding materials, especially crosslinking agent and co-crosslinking agent and vulcanizing conditions, a core having a desired hardness (as expressed by a distortion under a load of 100 kg) can be obtained. Herein, the core is preferably formed to yield a distortion under a load of 100 kg of 2.0 to 5.0 mm, more preferably 3.0 to 4.8 mm. With a distortion falling within this range, sufficient restitution, pleasant hitting feel, and improved scraping resistance are achievable.

Yamagishi's cover outer layer 3 is formed to a greater specific gravity than the core 1 and the cover inner layer 2, thereby achieving a high inertia moment and

producing a golf ball having excellent flight stability and go-straight stability upon putting. The cover outer layer's specific gravity is properly selected in accordance with the specific gravity of the core and cover inner layer although it is preferred that the cover outer layer is formed to a specific gravity of at least 1.10, especially 1.10 to 1.25 and the difference of specific gravity between the cover outer layer and the core is 0.01 to 0.15. Yamagishi's cover inner layer 2 has a specific gravity of 0.9 to 1.2. The cover outer layer is preferably formed to a Shore D hardness of 40 to 68, more preferably 43 to 65. A Shore D hardness of less than 40 would lead to low restitution whereas a Shore D hardness of more than 68 would blunt the hitting feel.

Yamagishi's cover outer layer 3 may be formed of conventional cover stocks, preferably thermoplastic resins. The thermoplastic resins that may be used include thermoplastic polyurethane elastomers, ionomer resins, polyester elastomers, polyamide elastomers, propylene-butadiene copolymers, 1,2-polybutadiene, and styrene-butadiene copolymers. These resins may be used alone or in admixture of two or more. Yamagishi prefers to use thermoplastic polyurethane elastomers as a base. To satisfy the cover's specific gravity defined above, various fillers such as barium sulfate, titanium oxide and magnesium stearate may be blended in the thermoplastic resin. In Table 4, Yamagishi teaches that the inner cover layer can be made from

either Hytrel 4047 (a polyester-based thermoplastic elastomer) or a mixture of 50% Himilan 1706 (an ionomer resin) and 50% Himilan 1605 (an ionomer resin).

Table 4 of Yamagishi teaches a golf ball (see example E4) comprising a solid core made from cis-1, 4-polybutadiene and zinc acrylate; an inner cover layer made from a mixture of 50% Himilan 1706 (an ionomer resin) and 50% Himilan 1605 (an ionomer resin); and a polyurethane outer cover layer having a Shore D hardness of 53. The solid core has a distortion under a load of 100 kg of 3.30 mm.<sup>1</sup>

It is well settled that the burden of establishing a *prima facie* case of anticipation resides with the United States Patent and Trademark Office (USPTO). See In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). Anticipation is established only when a single prior art reference discloses, expressly or under the principles of inherency, each and every element of a claimed invention. RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). In other words, there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. Scripps Clinic & Research Found. v. Genentech Inc., 927 F.2d 1565, 1576,

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<sup>1</sup> This is the only golf ball taught by Yamagishi that has an inner cover layer made from an ionomer resin.

18 USPQ2d 1001, 1010 (Fed. Cir. 1991). When the claimed invention is not identically disclosed in a reference, and instead requires picking and choosing among a number of different options disclosed by the reference, then the reference does not anticipate. Thus, the invention must have been known to the art in the detail of the claim; that is, all of the elements and limitations of the claim must be shown in a single prior reference, arranged as in the claim. See Karsten Mfg. Corp. v. Cleveland Gulf Co., 242 F.3d 1376, 1383, 58 USPQ2d 1286, 1291 (Fed. Cir. 2001); Akzo N.V. v. International Trade Commission, 808 F.2d 1471, 1480, 1 USPQ2d 1241, 1245-46 (Fed. Cir. 1986), cert. denied, 107 S.Ct. 2490 (1987); In re Arkley, 455 F.2d 586, 587-88, 172 USPQ 524, 526 (CCPA 1972).

Yamagishi does not anticipate claims 38 and 53 for the reasons set forth by the appellants in the brief. The only disclosed golf ball in Yamagishi that has an inner cover layer made from an ionomer resin is example E4. However, golf ball E4 of Yamagishi does not disclose the following limitations: (1) a core with a PGA compression of 55 or less;<sup>2</sup> (2) an outer cover layer having a Shore D hardness of about 58 or more;<sup>3</sup> (3) the

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<sup>2</sup> Golf ball E4 of Yamagishi has a solid core having a distortion under a load of 100 kg of 3.30 mm. Utilizing the examiner's linear method of conversion as set forth in the answer, this equates to a PGA compression of about 70.

<sup>3</sup> Golf ball E4 of Yamagishi has an outer cover layer with a Shore D hardness of 53.

ball having a PGA compression of 80 or less; and (4) the ball having a coefficient of restitution of at least 0.780.

Yamagishi does not anticipate claim 47 for the reasons set forth by the appellants in the brief. No golf ball disclosed by Yamagishi discloses the following combination: (1) a solid core with a PGA compression of 55 or less; (2) a polyurethane outer cover layer having a Shore D hardness of about 58 or more; (3) the ball having a PGA compression of 80 or less; and (4) the ball having a coefficient of restitution of at least 0.780.

In rejecting claims under 35 U.S.C. § 103(a), the examiner bears the initial burden of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A prima facie case of obviousness is established by presenting evidence<sup>4</sup> that would have led one of ordinary

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<sup>4</sup> Evidence of a suggestion, teaching, or motivation to modify a reference may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved, see Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996), Para-Ordinance Mfg., Inc. v. SGS Importers Int'l., Inc., 73 F.3d 1085, 1088, 37 USPQ2d 1237, 1240 (Fed. Cir. 1995), cert. denied, 117 S. Ct. 80 (1996), although "the suggestion more often comes from the teachings of the pertinent references," In re Rouffet, 149 F.3d 1350, 1355, 47 USPQ2d 1453, 1456 (Fed. Cir. 1998). The range of sources available, however, does not diminish the requirement for actual evidence. That is, the showing must be clear and particular. See, e.g., C.R. Bard Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998), cert. denied, 119 S. Ct. 1804 (1999). A broad conclusory statement regarding the obviousness of modifying a reference, standing alone, is not "evidence." Thus, when an examiner relies on general knowledge to (continued...)

skill in the art to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988) and In re Lintner, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference. See In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1316-17 (Fed. Cir. 2000).

In this case, the examiner has not met the initial burden of presenting a prima facie case of obviousness. In that regard, the examiner has not presented any evidence whatsoever that would have led one of ordinary skill in the art to have modified Yamagishi so as to arrive at the claimed invention. While the examiner may well be correct that there is prior art establishing the obviousness of each limitation (i.e., a solid core with a PGA compression of 55 or less; a polyurethane outer cover layer having a Shore D hardness of about 58 or more; a ball having a PGA compression of 80 or less; and a ball having a coefficient of restitution of at least 0.780), the examiner has not applied that prior art in the rejection under appeal. Moreover, most if not all inventions arise from a combination of old elements. See In re Rouffet, 149 F.3d 1350,

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<sup>4</sup> (...continued)  
negate patentability, that knowledge must be articulated and placed on the record. See In re Lee, 277 F.3d 1338, 1342-45, 61 USPQ2d 1430, 1433-35 (Fed. Cir. 2002). See also In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999).

USPQ2d 1453, 1457 (Fed. Cir. 1998). Thus, every element of a claimed invention may often be found in the prior art. See id. However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. See id. Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the appellants. See In re Dance, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998); In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). In this case, the examiner has not even alleged that the prior art discloses a single golf ball having a solid core with a PGA compression of 55 or less; an outer cover layer having a Shore D hardness of about 58 or more; the golf ball having a PGA compression of 80 or less; and the golf ball having a coefficient of restitution of at least 0.780.

For the reasons set forth above, the decision of the examiner to reject claims 38 to 42, 44 to 49 and 51 to 57 under 35 U.S.C. § 102(e) and 35 U.S.C. § 103(a) is reversed.

CONCLUSION

To summarize, the decision of the examiner to reject claims 38 to 42, 44 to 49 and 51 to 57 under 35 U.S.C. § 102(e) and 35 U.S.C. § 103(a) is reversed.

REVERSED

*Charles E. Frankfort*

CHARLES E. FRANKFORT  
Administrative Patent Judge

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) BOARD OF PATENT

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) AND

) INTERFERENCES

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Appeal No. 2005-1116  
Application No. 10/077,148

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